FIG. 1

```
Met Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp
-1                  5                  10                  15

Ser Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg
                20                  25                  30

Gly His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro
            35                  40                  45

Val Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Arg Pro Val
        50                  55                  60

Lys Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys
    65                  70                  75

Lys Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys
80                  85                  90                  95

Leu Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala
                100                 105                 110

Leu Ser Arg Lys Ile Gly Arg Thr
            115
```

FIG. 2A

```
ATGTACGCTG AACACAAATC TCACCGTGGT GAATACTCTG TTTGCGACTC TGAATCTCTG    60

TGGGTTACCG ACAAATCTTC TGCTATCGAC ATCCGTGGTC ACCAGGTTAC CGTTCTGGGT   120

GAAATCAAAA CCGGTAACTC TCCGGTTAAA CAGTACTTCT ACGAAACCCG TTGCAAAGAA   180

GCTGCACCGG TTGACAACGG TTGCCGTGGT ATCGACGACA AACACTGGAA CTCTCAGTGC   240

AAAACCTCTC AGACCTACGT TCGTGCTCTG ACCTCTGAAA ACAACAAGCT TGTTGGTTGG   300

CGTTGGATTC GTATCGACAC CTCTTGCGTT TGCGCTCTGT CTCGTAAAAT CGGTCGTACC   360
```

FIG. 2B

```
 Met Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp
-1                  5                  10                  15

 Ser Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg
                20                  25                  30

 Gly His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro
            35                  40                  45

 Val Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Ala Pro Val
        50                  55                  60

 Asp Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys
    65                  70                  75

 Lys Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys
80                  85                  90                  95

 Leu Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala
                100                 105                 110

 Leu Ser Arg Lys Ile Gly Arg Thr
            115
```

FIG. 3A

```
ATGTACGCTG AACACAAATC TCACCGTGGT GAATACTCTG TTTGCGACTC TGAATCTCTG      60

TGGGTTACCG ACAAATCTTC TGCTATCGAC ATCCGTGGTC ACCAGGTTAC CGTTCTGGGT     120

GAAATCAAAA CCGGTAACTC TCCGGTTAAA CAGTACTTCT ACGAAACCCG TTGCAAAGAA     180

GCTGCACCGG TTGACAACGG TTGCCGTGGT ATCGACGACA AACACTGGAA CTCTCAGTGC     240

AAAACCTCTC AGACCTACGT TCGTGCTCTG ACCTCTGAAA ACAACAAGCT TGTTGGTTGG     300

CGTTGGATTC GTATCGACAC CTCTTGCGTT TGCGCTCTGT CTCGTAAAAT CGGT           354
```

FIG. 3B

```
 Met Tyr Ala Glu His Lys Ser His Arg Gly Glu Tyr Ser Val Cys Asp
-1                   5                  10                  15

 Ser Glu Ser Leu Trp Val Thr Asp Lys Ser Ser Ala Ile Asp Ile Arg
                 20                  25                  30

 Gly His Gln Val Thr Val Leu Gly Glu Ile Lys Thr Gly Asn Ser Pro
             35                  40                  45

 Val Lys Gln Tyr Phe Tyr Glu Thr Arg Cys Lys Glu Ala Ala Pro Val
         50                  55                  60

 Asp Asn Gly Cys Arg Gly Ile Asp Asp Lys His Trp Asn Ser Gln Cys
     65                  70                  75

 Lys Thr Ser Gln Thr Tyr Val Arg Ala Leu Thr Ser Glu Asn Asn Lys
 80                  85                  90                  95

 Leu Val Gly Trp Arg Trp Ile Arg Ile Asp Thr Ser Cys Val Cys Ala
                 100                 105                 110

 Leu Ser Arg Lys Ile Gly
             115
```

FIG. 4

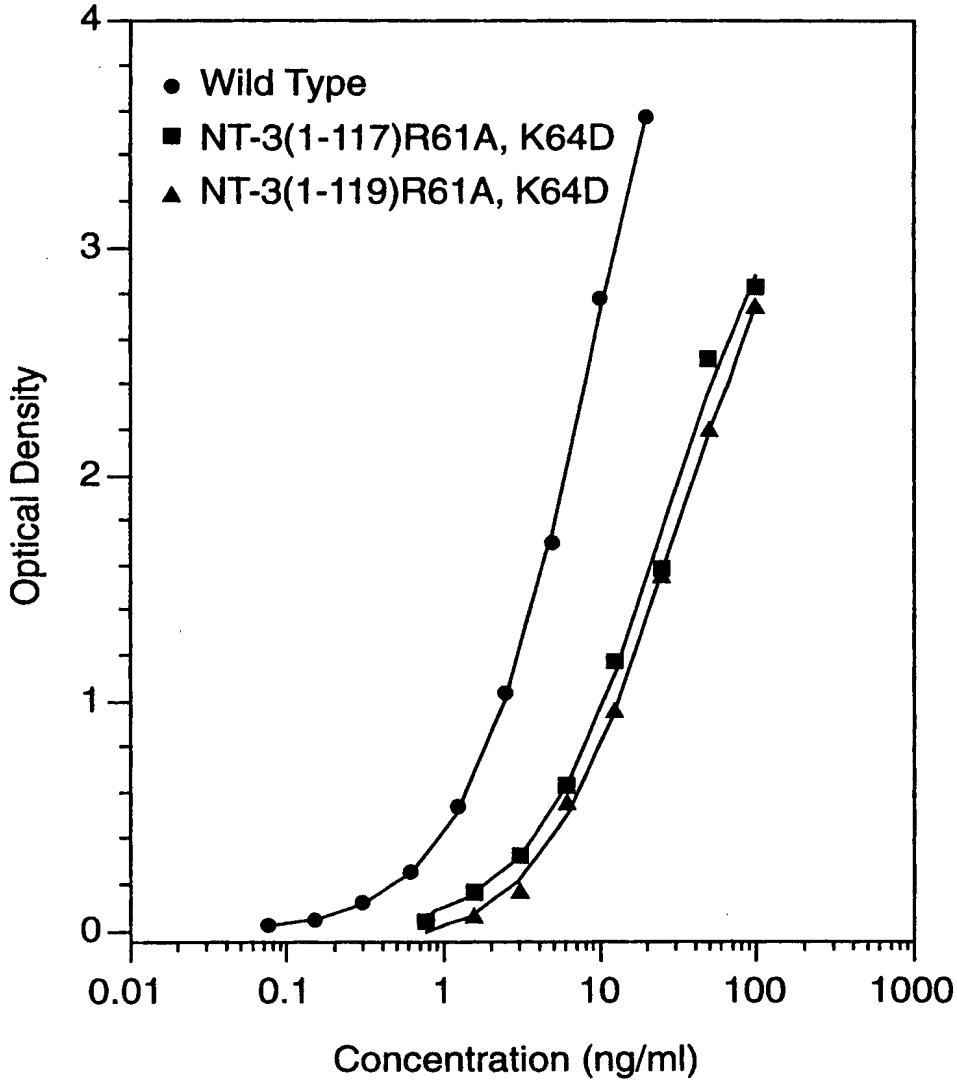

Wild Type
NT-3(1-117)R61A, K64D
NT-3(1-119)R61A, K64D
Optical Density
0
1
2
3
4
0.01
0.1
1
10
100
1000
Concentration (ng/ml)

FIG. 5

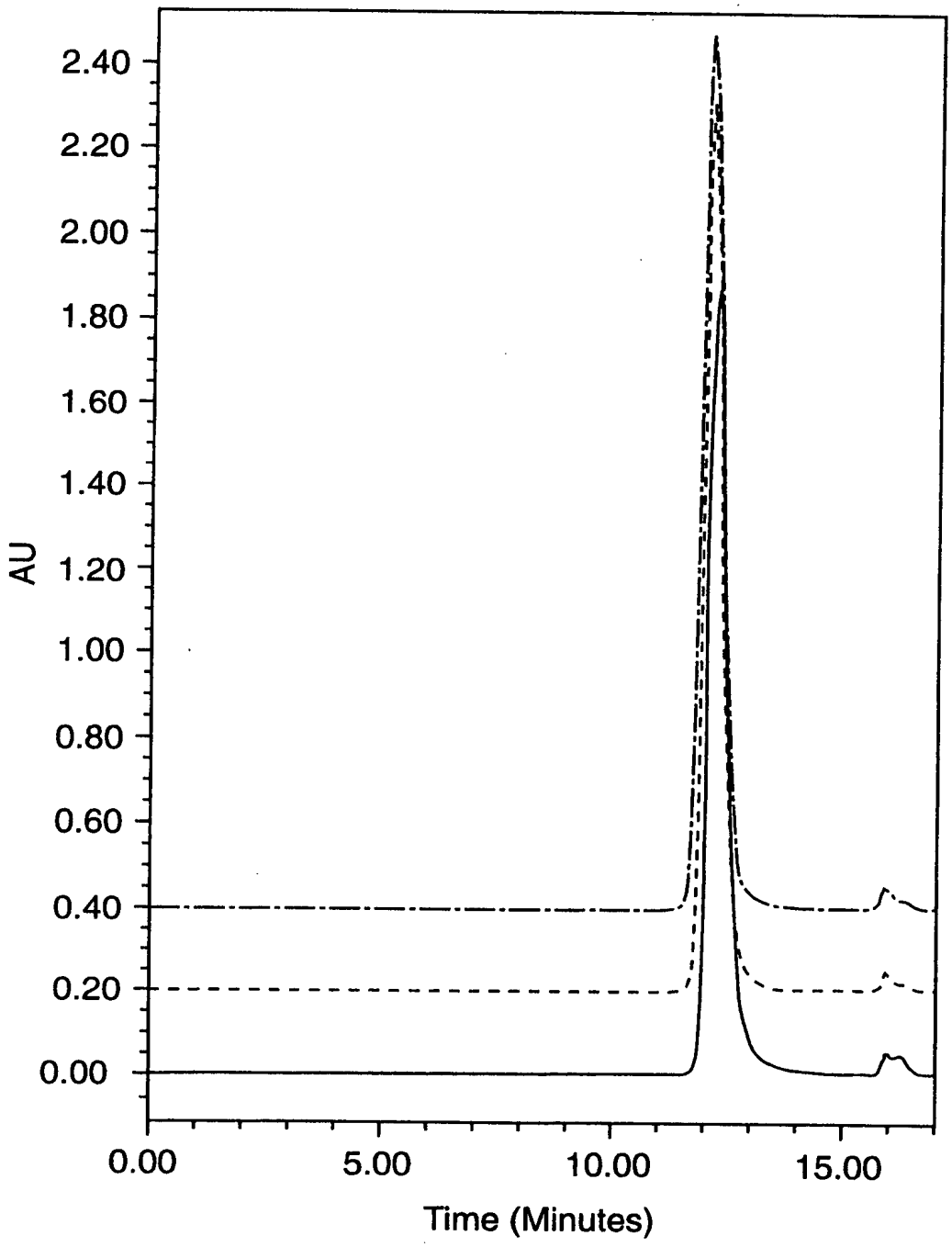

2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
AU
0.00
5.00
10.00
15.00
Time (Minutes)

FIG. 6

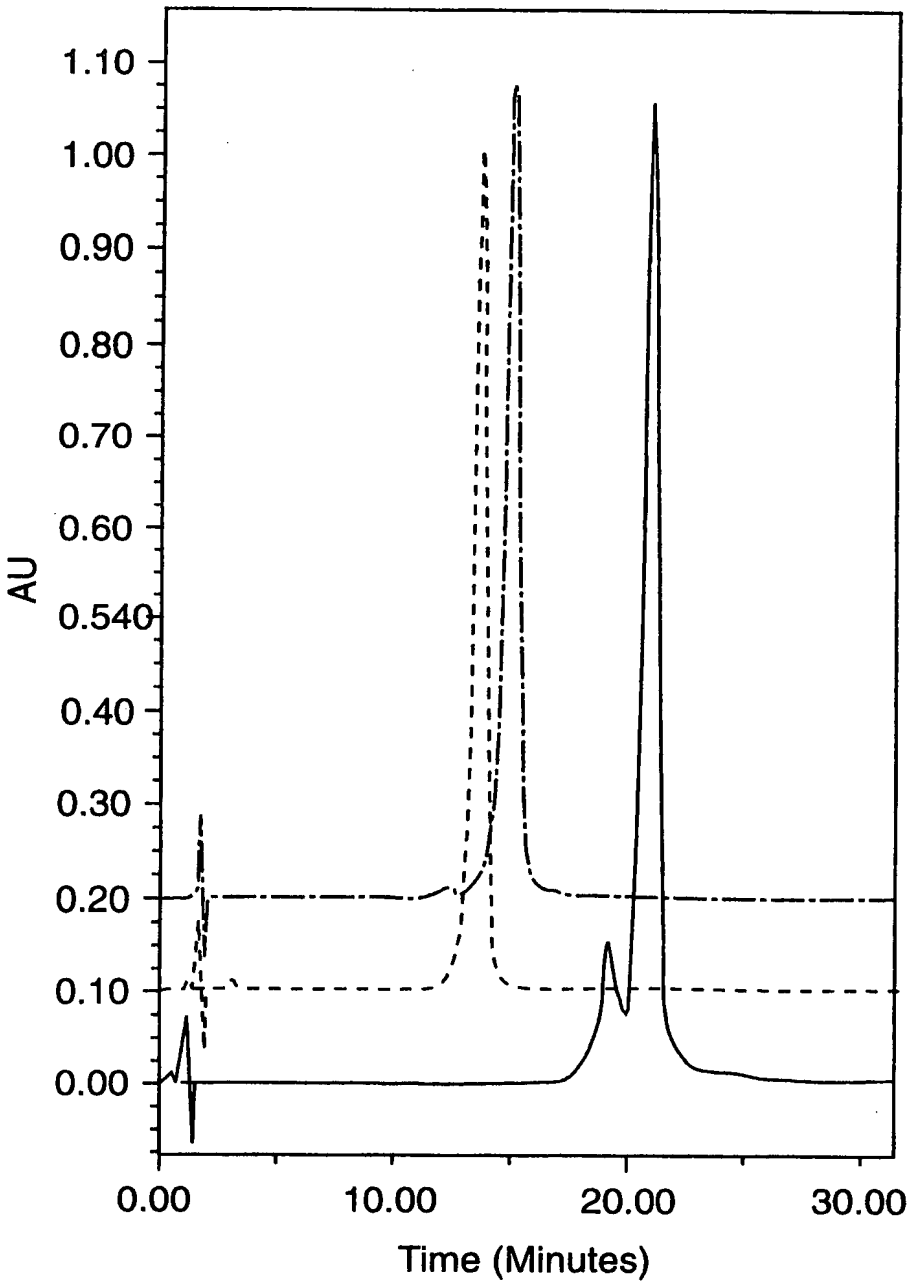

1.10
1.00
0.90
0.80
0.70
0.60
0.540
0.40
0.30
0.20
0.10
0.00
AU
0.00
10.00
20.00
30.00
Time (Minutes)

FIG. 7

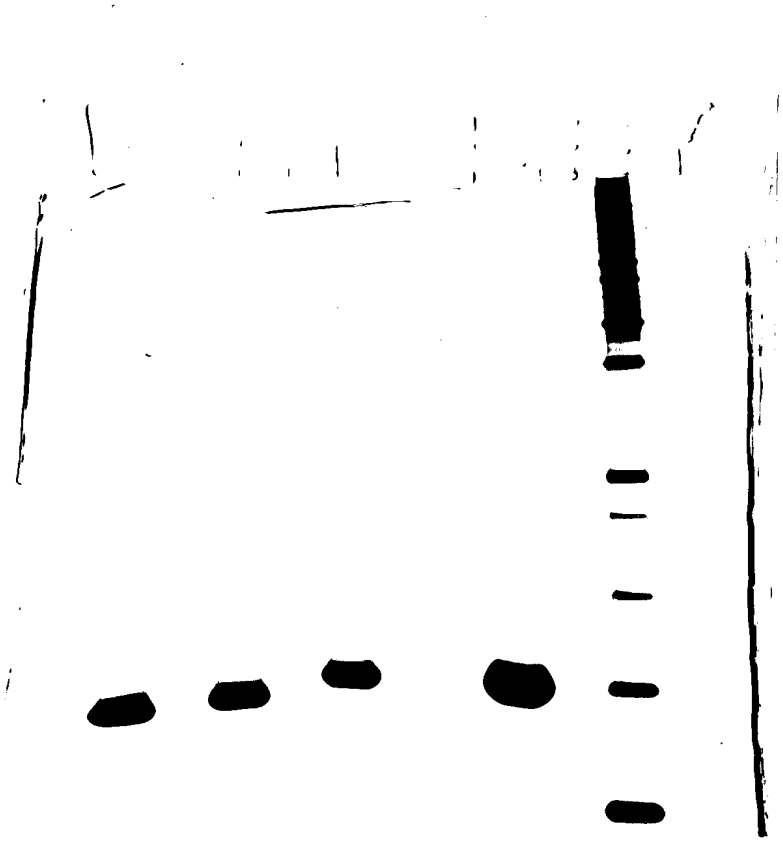


FIG. 8

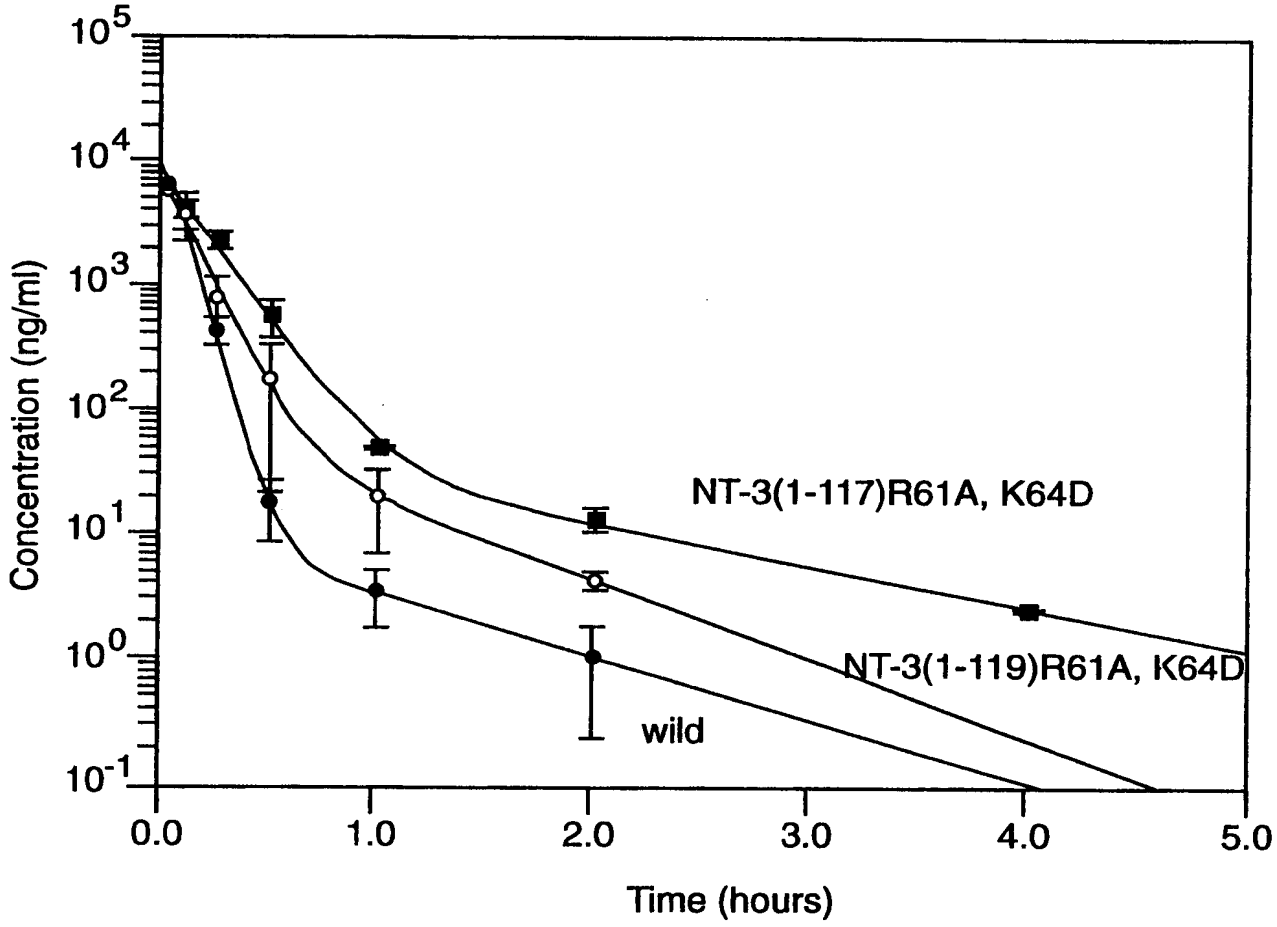
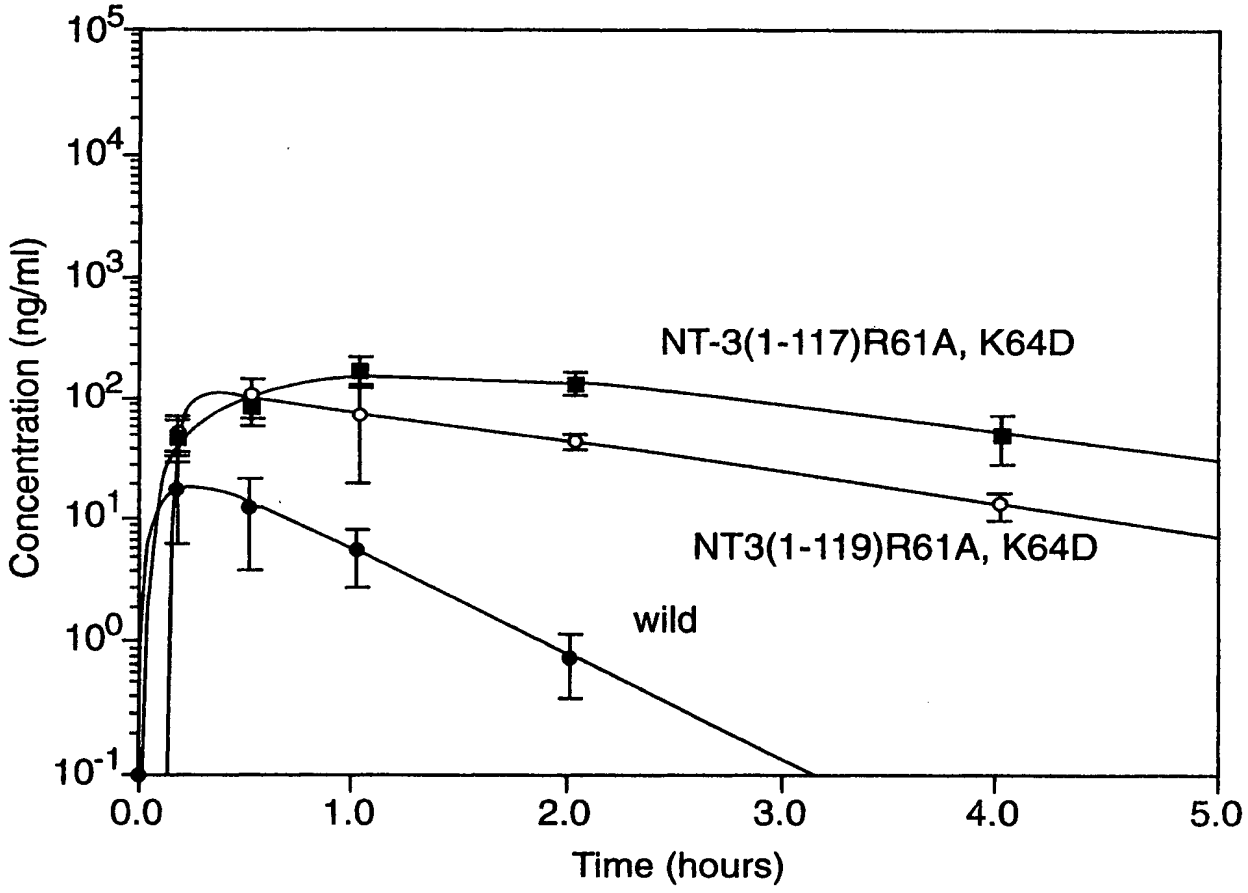

Concentration (ng/ml)
10^5
10^4
10^3
10^2
10^1
10^0
10^{-1}
0.0
1.0
2.0
3.0
4.0
5.0
Time (hours)
NT-3(1-117)R61A, K64D
NT-3(1-119)R61A, K64D
wild

FIG. 9


Concentration (ng/ml)
10^5
10^4
10^3
10^2
10^1
10^0
10^{-1}
NT-3(1-117)R61A, K64D
NT3(1-119)R61A, K64D
wild
0.0
1.0
2.0
3.0
4.0
5.0
Time (hours)